

### **REMARKS**

This Amendment, submitted in response to the non-final Office Action dated September 8, 2004, is believed to be fully responsive to the points of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

The Examiner objected to the Drawings under 37 1.83(a) for failure to show the secondary cooling slot. However, Applicants respectfully submit that the (secondary) cooling slot 114 is shown in FIG. 15. In addition, the (secondary) cooling slot is discussed on page 10, beginning at line 23 and continuing to page 11, line 23. Applicants respectfully request that the objection to the drawings be withdrawn.

The specification has been amended to replace "secondary cooling slot 114" with "cooling slot 114." No change in scope is intended by this amendment.

Claims 1, 3, 4, 6-48 are pending. Claims 1, 3, 4, 6-12, 15, 18, 27, 37, 38 and 41-44 have been amended. New Claims 45-48 are added. Claims 2 and 5 have been cancelled.

Claim 37 has been rejected under 35 USC 112, second paragraph. Claims 1, 2, 11, 13-17 and 19 have been rejected under 35 USC 102(b) over US Patent No. 6,234,755 (Bunker). Claims 37-41, 43 and 44 have been rejected under 35 USC 102(b) over US Patent No. 3,864,199 (Meginnis). Claims 25, 26 and 28-36 have been rejected under 35 USC 103(a) over Bunker, in view of Bradbury (Journal of Fluid Mechanics, 1975, Vol. 70, part 4, pages 801-813). Claims 8 and 9 have been rejected under 35 USC 103(a) over Bunker. (Based on the Examiner's comments, Applicants assume that Claims 9 and 10 were intended, not Claims 8 and 9.) Claims 20-24 were found to be allowable. Claims 3-8, 12, 18, 27 and 42 were found to be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims. Applicants respectfully submit the following remarks in support of the patentability of the claims.

**1. 35 USC 112, second paragraph:**

Claims 37 and 38 have been amended to replace "secondary cooling slot" with "cooling slot." This amendment does not narrow the scope of the claim. Applicants respectfully submit that Claims 37 and 38 are definite and request that the rejection of Claim 37 under 35 USC 112, second paragraph, be withdrawn.

**2. Claims 1, 3, 4, 6-19 and 45-48:**

Claim 1 has been amended to include the additional recitations of original Claims 2 and 5. Claims 2 and 5 have been cancelled. Claims 6-8 have been amended to depend from Claim 1. Claims 13, 14 and 19 depend from Claim 1. No new matter has been added by the amendments. The Examiner indicated that original Claim 5 contained allowable subject matter. Accordingly, Applicants respectfully submit that Claims 1, 6-8, 13, 14 and 19 are in condition for allowance.

Claims 3 and 4 have been rewritten in independent form. Claims 9 and 10 have been amended to depend from Claim 4, and new Claims 45-48 depend from Claim 4. Claims 11 and 15 have been amended to depend from Claim 3. Claims 16 and 17 depend from Claim 15. No new matter has been added. The Examiner indicated that original Claims 3 and 4 contained allowable subject matter. Accordingly, Applicants respectfully submit that Claims 3, 4, 9, 10, 11, 15-17 and 45-48 are in condition for allowance.

Claims 12 and 18 have been rewritten in independent form. The Examiner indicated that original Claims 12 and 18 contained allowable subject matter. No new matter has been added by the amendments. Accordingly, Applicants respectfully submit that Claims 12 and 18 are in condition for allowance.

**3. Claims 20-24:**

Claims 20-24 have been allowed.

**4. Claims 25-36:**

Claims 25, 26 and 28-36 have been rejected over Bunker, in view of Bradbury. The Examiner relies on Bradbury to supply at least one flow modifier formed on the passage wall of the film cooling hole and adapted to spread the coolant flowing from the film-cooling hole and out of the exit site laterally. However, Bradbury is not directed to hot gas path components, nor to film cooling and does not teach or suggest forming at least one flow modifier on a passage wall of a film cooling hole. On the contrary, Bradbury is directed to the distortion of a jet by tabs. The apparatus of Bradbury is shown in FIG. 1 thereof. Applicants respectfully submit that Bradbury's teaching that the insertion of small rectangular tabs into the jet flow on the nozzle (Abstract), and more

particularly, Bradbury's teaching that the insertion of two tabs produced gross distortions in the jet development resulting in the jet almost splitting in two (Abstract) would not suggest the claimed invention to one skilled in the art.

For at least these reasons, Applicants respectfully submit that Claim 25 is patentably distinguishable over the cited art, either alone or in combination. Further, as Claims 26 and 28-36 depend from Claim 25, these claims are also patentably distinguishable over the cited art for at least these reasons. In view of the above, Applicants respectfully request that the rejections of Claims 25, 26 and 28-36 over the cited art be withdrawn.

The Examiner indicated that Claim 27 contained allowable subject matter. Claim 27 has been rewritten in independent form. Applicants respectfully submit that Claim 27 is in condition for allowance.

**5. Claims 37-44:**

Claim 37 has been amended to more clearly recite the claimed invention. Support for the amendment can be found, for example, on page 10, lines 25-28 of the present application. As amended, Claim 37 recites a turbine assembly that includes a first turbine engine component, and a second turbine engine component. The first and second turbine engine components define a cooling slot, where the cooling slot receives and guides a secondary coolant flow. The turbine assembly further includes at least one flow modifier formed on a surface of one of the first and second turbine engine components. The at least one flow modifier is adapted to enhance the secondary coolant flow along at least one of the first and second turbine engine components within the coolant slot.

Meginnis is directed to an angular discharge porous sheet formed of two layers 11, 14 for use in hot environments. (Abstract) More particularly, the sheet is adapted for forming the surface of bodies exposed to high temperature gas, such as turbine blades and vanes and shrouds. (Col. 1, lines 1-15) The porous sheet 10 is formed of a front layer 11 and a rear layer 14. (Col. 2, lines 28-34) The layers are stacked and bonded together. (Col. 2, lines 46-48) Applicants respectfully submit that layers 11, 14 are not turbine engine components. In view of the above, Applicants respectfully submit that Claim 37 is not anticipated by Meginnis. Further, as Claims 38-41, 43 and 44 depend from Claim 37, these claims are also not anticipated by Meginnis for at least these reasons. Accordingly, Applicants respectfully request that the rejections of Claims 37-41, 43 and 44 under 35 USC 102(b) be withdrawn.

The Examiner indicated that Claim 42 contained allowable subject matter. Claim 42 has been rewritten in independent form. Applicants respectfully submit that Claim 42 is in condition for allowance.

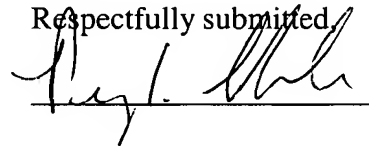
**CONCLUSION**

In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

**Please charge all applicable fees associated with the submittal of this Amendment and any other fees applicable to this application to the Assignee's Deposit Account No. 07-0868.**

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number below.

Respectfully submitted,



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